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ABSTRACT

The institutions and practices of agricultural extension in Australia are changing to meet the changing needs of rural people and communities. Issues and challenges facing rural people include the declining relative economic importance of agriculture; the declining agricultural workforce; and the shift in agriculture from a purely production orientation to a more holistic view that considers broad trade issues, sustainability, marketing requirements, and the dependence of agriculture on other parts of the economy. With trends toward smaller government and client payment for services, rural people are becoming consultants and participants in delivery of extension services. The role of extension professionals is also changing to incorporate new features: focus on measurable outcomes and accountability, facilitation of group processes, systems orientation, working within a program on limited projects, working with collaborators from other technical disciplines and organizations, and moving between roles in the public and private sectors. The Rural Extension Centre (REC), established in 1993 as a joint initiative of the Queensland Department of Primary Industries and the University of Queensland, provides professional training and facilitates research in support of rural extension. A case study focuses on REC in relation to key future strategies for rural people and extension workers: (1) willingness to adapt to rapid change; (2) self-reliance and self-direction as a learner; (3) action orientation concerned with goals and outcomes; (4) collaboration; (5) monitoring and evaluation; and (6) modeling constructive behaviors. Contains 12 references. (SV)

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BUILDING HUMAN RESOURCES FOR RURAL CHANGE

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BUILDING HUMAN RESOURCES FOR RURAL CHANGE

E.J.Woods, R.F.Fell, and J.A.Coutts — Australia

ABSTRACT

The institutions and practices of agricultural extension are changing to maintain relevance in the 1990ts and also to meet the new challenges which face rural people. These challenges include the demands for greater consultation and participation by the clients and stakeholders of government services; changing patterns of services between the public and private sectors; new communication technologies and information services; and holistic approaches to facilitating community action on issues with production, marketing, resource management, and community satisfaction dimensions. These trends imply needs for new skills amongst extension professionals and for industry and community participants.

This paper examines the implications for training to effectively provide people with these new skills, using the case study of the Rural Extension Centre. New institutional structures and collaborations will enable clients and stakeholders to guide university level training in frameworks which fit professional roles and deliver immediate benefits to the participant and the employer. Linkages are being developed between previously separate services - extension services to rural people, tertiary education in extension, skills training in communication and rural leadership, and consultancies and research into extension processes. Critical issues of consultation, priority setting and evaluation are considered.

INTRODUCTION

The 1990's have been characterised as a decade of rapid change. Professionals working in agricultural extension and related occupations service rural people responding to the pressures of change. The changes facing extension professionals are from two main sources. Firstly, the nature of the issues facing rural people are changing. Secondly, the ways in which the profession delivers service and maintains the professional capacities of its members are changing.

Several key strategies are required to successfully work with rural people through the next decade. Rural people and extension professionals will require new skills. These include the ability to create new solutions, and to develop capacities for monitoring, evaluation and reflection which refine these solutions and give confidence to build on them further. New institutions, relationships and practices must also be developed to maintain viable rural communities into next century.

There are no established solutions to the new issues facing rural people, extension workers, or, in all probability, other professional groups working with rural people. The challenge of the 1990ts is to adopt a self reliant, action learning approach, applying the necessary rigour to move forward with confidence.

THE CHANGING NEEDS OF RURAL PEOPLE, RURAL INDUSTRIES, AND RURAL COMMUNITIES

Declining relative economic importance of agriculture

For rural people in Australia, the last ten years have been extremely challenging. Undoubtedly the major challenge has been the continuing decline in the terms of trade for Australian agriculture. (For a concise summary see Henzell, Radcliffe, and Smith, 1993.) This has resulted in agriculture becoming proportionately less important as a contributor to Gross National Product, direct national employment, national exports, and other economic indicators (Jensen, 1993). The same trend is evident throughout the developed economies. In Australia, this effect has been exaggerated by distortions in world markets as a result of subsidised sales from the European Community and the United States.

In Queensland, the historically low commodity prices have combined with prolonged drought conditions to seriously weaken the economic position of agriculture . There has been substantial social dislocation (including stress, reduced access to education as financial pressure causes the withdrawal of children from boarding schools, and family separation as off-farm work is sought to provide basic sustenance). Significant structural adjustment can be expected in several industries in the next few years.

Declining agricultural workforce

The decline in relative economic importance of the agricultural production sector has been accompanied by declining numbers of people involved in the sector. Both result in a significant loss of the political power of farming people; *the voice of the bush* in public decision making has become faint. The sector has only limited capacity to oppose the impact of the general trends towards *user pays* and *smaller government* on services specific to their sector.

Declining numbers of people employed in agriculture and declining income from agriculture affect the population of rural non-farm people. Among key effects are loss of service infrastructures and social networks,-inability within rural communities to adapt to change and to accept and handle benevolent government programs, and the delivery of specialist services in modes suited to urban but not rural people (Centre for International Economics, 1992).

The declining number of people involved in production agriculture also affects the way in which farming is viewed by the majority of the population. In the past, farming people were viewed as the backbone of Australia, a nation which *rode on the sheep's back*. In recent years, agricultural production methods have been viewed with suspicion. The use of farm chemicals is questioned as posing safety risks to agricultural products and the environment; animal welfare issues have been raised in regard to animal production techniques; and the off-farm effects of agriculture are viewed as a serious threat to the maintenance of significant natural resources such as the Barrier Reef. A declining number of people in agriculture must shoulder the role of being advocates for their industry, and of defending the value of their industries to the economy.

Facing complex problems

The progress of agriculture and agricultural research from a purely production orientation to a more holistic view has been widely documented. Agricultural producers, communities, and support professionals today face :

- the need to increase profitability in the face of declining terms of trade;
- the need to improve the long term sustainability of their production practices in response to increasing community concern for the environment;
- demands for marketing skills to identify market opportunities in lieu of statutory marketing arrangements, to practise quality assurance and world best practice, to produce reliably at the required time and quantity, in the face of variable weather conditions;
- the need to negotiate futures markets, variable currency exchange rates, and domestic demands for cheap, high quality production; and
- the realisation that agriculture is dependant on developments in other parts of the economy.

Trends to consultation and participation

Accompanying the trends to *user pays* and *small government* has been an increasing demand for accountability. One strategy to meet accountability requirements is to consult and negotiate with clients on high priority activities, and to encourage or require client participation in the delivery of services. In addition to reducing the chance that the services will be misdirected or irrelevant, consultation and participation increase client ownership of activities and the chance that the activity will be highly valued. However, these processes represent significant demands on the stretched resources of rural people. Rural people and extension

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workers also require new skills to participate in or facilitate these processes.

THE CHANGING ROLE OF EXTENSION PROFESSIONALS

Agricultural extension was first established in the US to increase the productivity of agriculture and improve the quality of life for rural people. The chief vehicle of extension in the US has been the Co-operative Extension Service through the Land Grant colleges. These colleges were established in 1914 and link the functions of education, research and extension. Co-operative Extension Service activities have addressed both agricultural and household/ community issues affecting rural people, and the mode of operation has unashamedly focused on adult education. Recent years have seen debate on the breadth of activities undertaken by the extension service, as public funding has declined and the farming population has faced increasing pressure on their viability (Warner and Christenson, 1984).

Agricultural extension services in Australia were also established early this century but have had a relatively narrower technical focus, firstly on production and in more recent years, on resource management, business management, and marketing. The focus on technical subject matter has been accompanied by a tendency to operate in *transfer of technology* mode (Russell, Ison, Gamble, and Williams, 1989).

Recent reviews of institutional extension services in Australia have confirmed their contribution to agricultural progress but have generally identified opportunities for greater impact by increasing the focus of extension activities and the involvement of clients. The reviews have produced significant agreement that at least in principle, clients should pay for extension services which provide significant private benefits. This has the potential to encourage an expansion in the proportion of extension services provided through the private sector. (See, for example, Wythes, Woods, and Gleeson (1990), Watson, Hely, OiKeefe, Cary, Clark and Allen (1992), and McKinsey and Company (1992) for reviews of extension policy in Queensland, Victoria, and South Australia respectively.)

Key features of the new roles of extension workers include:

- a focus on achieving measurable outcomes and requirements for accountability;
- facilitating group processes to consult clients and other stakeholders, to define existing situations, and to involve stakeholders in extension processes;
- a systems orientation to deal with complex, multidimensional problems;
- working within a program framework in defined, limited term projects, often with funds from the rural research and development corporations;
- working with collaborators - across other technical disciplines, other organisations, and other groups within the rural sector;
- moving between roles in the public and private sectors, shifting technical focus to new priorities, and building a career on a series of short term projects.

KEY FUTURE STRATEGIES FOR RURAL PEOPLE AND FOR RURAL EXTENSION WORKERS

The changing roles and demands on rural people and extension workers were traced in the previous sections. Based on these expectations, we believe that key future strategies for individuals in both groups will be:

- developing a willingness to adapt to rapid change;
- developing self reliance and self direction as a learner;
- an action orientation (concerned with outcomes and achieving goals - personal, client, and / or organisational);
- collaboration;
- regular monitoring and evaluation;
- modelling constructive behaviour - a commitment to principles in action as well as in philosophy.

In the following section, these strategies will be examined in relation to a case study, the establishment and operation of the Rural Extension Centre, University of Queensland Gatton College.

CASE STUDY: THE RURAL EXTENSION CENTRE

The purpose of a case study is to illustrate principles or ideas more clearly through describing the processes and results of their enactment. The Rural Extension Centre (REC) was established in 1993 as a joint initiative of the Queensland Department of Primary Industries (DPI) and the University of Queensland (UQ). The choice of the REC for this case study is highly relevant since its establishment represented a willingness to adapt to rapid change by two institutions with a long history of involvement in agricultural extension.

From the DPI perspective, the Centre is an initiative under the new Extension Strategy (DPI, 1992) adopted by the Queensland government. This Extension Strategy envisaged that the REC would:

> provide a focus for the development of extension and the social sciences pertinent to the needs of rural communities...
>
> link with other institutions and organisations with an interest in rural extension...
>
> provide in-service training in extension methodologies and the social sciences, post-graduate extension training, and facilitate research in support of rural extension...
>
> provide a discipline focus for the (DPI) Regional Extension Specialists.
>
> (DPI, 1992; p 6)

From the University perspective, the Centre builds on a long history of involvement in agricultural extension education and on a vision to expand this involvement into a specialised centre with increased capacity to contribute to rapid changes facing rural people in general, and in particular, those working in rural extension.

In examining the strategies proposed in the previous section in relation to the REC, the analysis will be extremely preliminary in some cases. Our communication is intended to inform interested people of the directions we are exploring and the activities we are beginning. We are not keen to relearn the mistakes of others; we would prefer to avoid them by inviting others to contribute their hard-won wisdom. We are committed to collaboration and we seek potential partners. We have a commitment to learning and action, and in presenting this paper, we are modelling that behaviour.

Developing a willingness to adapt to rapid change

Patton (1993) identified evaluation and futuring as complementary approaches to develop effectiveness in the face of rapid change. The first component of evaluation is to test reality - to rigorously approach the issue of the current strengths and weaknesses, opportunities and threats facing rural people. In establishing the REC, a large group of potential stakeholders and clients were involved in focus group discussions in just such a process. They identified several issues of high current priority facing rural people and extension. These included:

- the economic crisis facing primary producers and the need for a greater business orientation;
- managing change and resolving issues which are wider than agricultural production or technology;
- providing farmers with skills to use information to make better decisions;
- improving the effectiveness of extension services; and

- developing and implementing effective new extension models to meet funding restrictions and other changes in the provision of extension.

This process led to the development of the Rural Extension Centre's mission statement, which is

to lead the development of extension as a professional activity assisting rural industries and communities to address major problems and opportunities for their sustainable development,

and to the recognition that this mission needed to be linked to a scope statement which made explicit a commitment to a wider focus than the traditional role of agricultural extension in the public sector.

The scope of the Centre is outlined as:

- **Clients**: People involved in extension in the public sector (Commonwealth, State, and Local government agencies), in the private sector (including agribusiness and consultants), in industry and community organisations, and students of agriculture and natural resource systems;
- **Activities**: Research, education, training, consultancy and practical extension activities;
- **Sustainable development**: Encompassing social, economic, and ecological aspects;
- **Integration**: A catalyst for integration of technical, management and social science skills;
- **Initial focus**: Extension services directed to people who are stakeholders in the use of agricultural and natural resources (industry bodies, producer groups, producers, relevant input and output industries and the associated communities);
- **Long term vision**: To contribute to the wide range of extension services which work with rural industries and communities;
- **Geographical scope**: To address key issues at regional, state, national and international levels.

The RECs future directions are managed by a Board which includes representatives of UQ and DPI, but also members of stakeholder and client groups. One role of the Board is to regularly review the Centre's scope.

In doing so, the concept of futuring will be further developed. Patton (1993) described futuring as *constructing scenarios of possibilities, looking at their implications, monitoring trends and preparing ourselves for unknown possibilities so that as the future unfolds, we are ready for whatever occurs* (p.651). He points out that futuring is based on the assumption that the things we do now make a difference to the future, an assumption that is highly relevant to and consistent with the action orientation of extension.

Having considered the willingness to adapt to rapid change evident in the establishment of the REC and its key directions, two specific areas of activity - training for extension professionals, and linking with new communications technology - indicate how we are attempting to adapt.

Initial training activities have been based on consultation. Approximately 100 extension staff, extension managers, and other professional staff using extension related skills within DPI responded to a survey on their professional development needs in February 1993. Sixty-five percent of the extension staff who responded had no formal training in extension, and over 55% of all respondents were interested in undertaking further extension training.

The ten most frequent training needs identified by the respondents were (in rank order) : group facilitation, extension methodologies and theories, group dynamics, extension project management, computing skills, understanding adult education, project evaluation, information management, communication skills, and marketing/ business management. While all subgroups indicated common needs, non-graduates showed a higher preference for training in mass media and display, presentation, and social science skills. In response to a draft curriculum based on the core skills for roles outlined in the Extension Strategy, the three most highly favoured training modules were group facilitation, adult learning, and project evaluation. Over 56% of respondents were interested in taking a series of modules to form an accredited course.

The REC has responded by including the three most highly favoured topics in the first six months of its training program for extension professionals, which began in February 1994. All of the high priority training needs are being considered, with the exception of computer training, for which there are many alternate sources. A program within the framework of the Graduate Certificate/ Post-Graduate Diploma has been developed and accreditation is being sought within the University of Queensland.

A further, more comprehensive survey of extension staff within DPI is being conducted to clearly identify, by comparison with the results of a parallel survey conducted in 1987, how extension roles have changed and likely future needs for training. Similar studies of training needs within other client groups will be undertaken over the next two years. Possible groups include private sector extension related professionals, local government employees, rural research and development corporation members and employees, and community group leaders.

The final example in relation to adapting to rapid change is the issue of technological change. The information age has just begun to impact on many parts of remote Australia. New developments in telecommunications have placed reliable telephone services in remote Australia in the last 10 years (Barrow, 1987). Further technological advances are providing rural people with a whole new set of opportunities. The REC is exploring the possibilities in several ways.

Links through a Regional Extension Specialist with a federally funded telecentre development in Esk Shire, south east Queensland, provide the opportunity to gain some experience of its impact in an area of rural-urban interface. Resource use conflicts, changing social structures, new infrastructure needs are current issues and the impact of greater access to outside information is not clear cut. This activity links with a research interest in identifying the important components of quality of life for the rapidly increasing numbers of new residents in rural subdivisions, including social and infrastructure issues as well as the space and fresh air.

The Centre is also exploring a partnership with the CRC for Sustainable Cotton Production and the Distance Education Centre at the University of New England at Armidale. The initial aim will be to provide learning opportunities for the agronomists employed by consultants providing services to the cotton industry. Professional development opportunities for the extension related staff of private sector services are not well established, but will be critical to maintain responsible management of Australia's natural resources, and industries which are internationally competitive.

The unique feature of distance learning within extension is the commitment to linking learning and voluntary action to achieve planned outcomes. Extension does not focus on academic goals, but on the demonstrable achievement of outcomes such as improved lifestyles for rural people, more efficient and profitable agricultural production, and better management of natural resources. Hence a key question is the link between distance learning activities, taking action, and achieving outcomes at individual, industry and community levels.

Developing self reliance and self direction as a learner

The recognition of a global economy and the republican debate are two factors which highlight for Australians that nationally we are responsible for our own destiny. Links and groupings between nations are a means to ensure the type of future we desire, but our future prosperity is primarily in our own hands. The same philosophy is evident in policies as diverse as those for drought, where primary producers are to see management of natural disasters as their responsibility, and the policies for public sector employment, which clearly state that individual extension workers, like others employed in the public sector, are responsible for the development of their own careers.

We have encouraged individuals to focus on their learning behaviour in each of the REC courses to date. Our aim is that as well as acquiring a theoretical background and some practical skills in a high priority area, participants will have reviewed their own learning strategies and gained new insights to improve their capacities as self directed learners. Extension workers, like their clients, need to acknowledge that in an era of rapid change, next year will bring new and unique issues. These will require them to develop specific approaches based on past learning, but modified to the new situation.

For the same reason, a report prepared by the REC on Information Delivery Mechanisms contains bibliographies including all background literature as well as specific references. The aim is to provide maximum assistance to future learners. Much literature relevant to extension is contained in government papers and not included in traditional academic bibliographies. Consequently it is particularly difficult to locate extension references, so we have chosen a style designed to assist future use.

Action orientation

It is paradoxical that there is a focus on outcomes and achieving goals at the very time when many problems are recognised to be complex and unlikely to have clear solutions. The focus on outcomes does, however, link logically with a rapid pace of change. Unless action is linked to studying , describing and analysing problem situations, a study runs the risk of being outmoded by the time its results have been communicated to, and acted on by the relevant stakeholders. At best, some of the benefits of a study will have been foregone if beneficial results are not quickly converted to action.

The action orientation is familiar to extension with its emphasis on contributing to an improved quality of living. The emphasis on voluntary change means that to have rapid impact, extension activities need to align with the felt needs of people. We are attempting to enact the same principle in the training for extension professionals being offered through the REC. All subjects are offered as two intensive residential segments separated by a ten to twelve week period during which a relevant action learning project is undertaken. The aim is to link training with high priority activities already being undertaken by practising professionals. Learning is consolidated by planning, conducting, and reviewing field activities based on the learnings of the residential segments, followed by individual and joint reflection on the learnings from the activities undertaken.

In addition to assisting the learning of course participants, this activity makes visible to peers and managers the principles which the participant is testing, and contributes to wider review of professional practice. We also believe that the subject format provides those outside larger organisations or not in extension roles, but interested in acquiring extension related skills, with a temporary peer group with whom they can share and learn. Finally, the continuing process of adapting and refining extension approaches contributes to the professional capacity of REC staff, and through our communication, to a wider professional circle.

Where possible, we are seeking to link training with specific research or consultancy projects as well as fitting with the continuing work program of course participants. A recent course on conducting focus group research involved participants in a study of the use of green cane trash blanketing techniques by sugar producers. The issues involved in analysing and reporting qualitative data were much clearer to participants when they had collected the data themselves and knew the high levels of ownership and energy of focus group participants for their views.

Collaboration

The REC structure is collaborative by nature. It has a breadth of representation on its Board, and the capacity to add more core partners as well as to involve other groups in individual activities. Activities have been conducted in collaboration with the Bureau of Sugar Experimental Stations, with the rural research and development corporations, with several state government departments, with CSIRO, with private consultants, and with a rural womenís organisation. As noted in the previous section, we are seeking opportunities wherever possible to link training and research, or training and consultation activities.

Key future challenges include:

- to explore wider boundaries for collaboration, outside the traditional partnerships in agricultural and resource management extension. This is pertinent within the university as well as with outside groups;
- to explore the mechanisms by which the contribution of individuals within participative and collaborative teams can be recognised and rewarded;
- to develop stronger links with the private sector extension activities;
- to improve the collaboration between technical experts, extension professionals, and clients of their work.

Monitoring and evaluation

A key role for the REC is to assist extension professionals to monitor and evaluate their activities. In a recent study of information delivery mechanisms for research project results in Australia conducted by the Centre, a lack of evaluation studies that related to stages of the problem solving process beyond awareness was identified. The distinction between evaluation that focuses on the number of people potentially aware of an opportunity, those actually aware, those implementing the new approach, and the impact of the change is critical. It appeared that most resources have been focused on the first two stages, and few on the later stages (Woods, Moll, Coutts, Clark and Ivin, in press). Similarly, Patton (1993) identified lack of evaluation as a frequent weakness of extension activities.

There is a clear role to work with extension professionals to develop more rigorous approaches to evaluation, as well as to institute the regular monitoring of the results of their activities which should guide the operational management of their projects. The REC will do this through its training activities. We are also exploring opportunities to assist community based initiatives such as Landcare and Integrated Catchment Management in the development of their evaluation processes.

At a more formal level, the REC will be involved in evaluating the impact of DPIís Extension Strategy, both in the short term and the longer term. In the longer term, with greater emphasis on client consultation and participation, there should be growing links between the processes of planning, implementing, monitoring and evaluating. Activities with low perceived relevance should be less frequent, and there may be opportunities to fine-tune evaluation for the comparison of alternative approaches.

Within the Rural Extension Centreís training activities, short term evaluations are already underway. Feedback from the first group of subjects, while generally positive, highlighted the following needs (in rank order): more group discussion and recap sessions, adjust depth and scope to participantsí starting points; include more examples and case studies; and ensure the course folder and readings are well organised. An important realisation has been that many extension professionals learn better by linking theory to action, rather than action to theory. The majority of extension professionals do not have any formal training in extension or recent contact with formal training opportunities. Their extension orientation is to action, and this is the mode in which they are most open to new insights.

Modelling constructive behaviours

In a world of rapid change, there is a need for cultural change as well as cognitive change. Talking about strategies to cope with change is important, but modelling these behaviours is a more powerful influence for the necessary cultural changes.

Most extension professionals are familiar and comfortable with the processes of planning, implementing and observing. Linking these processes with reflection and analysis is the basis for self directed learning to handle the future. This paper is part of the process of reflection, and analysing the RECís progress, as was a short paper on extension training delivered to a workshop at the 1993

Australia-Pacific Extension Conference (Woods, 1993). The delivery of these papers at conferences enacts our commitment to collaboration and to inviting comment and participation. In developing our research program, we have similarly sought to involve as many local potential partners as possible, in a transparent workshop process of identifying and progressing priority issues.

CONCLUSION

We expect that the future will bring further rapid change. There will be continuing pressure on rural people to seek new ways to maintain happy and satisfying lives. New groups will develop and new relationships will form between those providing services to rural people. New technologies will offer the potential for better access to information and communications. The REC, like other organisations, will need to respond to these changes. Its aim is to maximise the contribution of extension to ensuring a better future, and to explore new ways in which this can occur.

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